

201

12.7 H₂O Key pF50-851 3-6, 8, 9, 11-15, 19

3. no $\frac{7}{4} \neq \frac{16}{10}$

4. $\frac{5}{9} = \frac{7}{12.6} \neq \frac{11}{14.8}$ NO

5. yes $\frac{6}{8} = \frac{17.5}{18} = \frac{4.5}{6} \checkmark$

6. yes $\frac{18}{27} = \frac{8}{12} \checkmark$

SF 1:2

8. $\frac{L}{4} = \frac{150\pi}{A}$ $\frac{L}{8} = \frac{250\pi}{V}$

$$SA = 600\pi \text{ in}^2$$

$$V = 2000\pi \text{ in}^3$$

9. SF 3:1

$$\frac{9}{1} = \frac{1500}{A}$$

$$\frac{27}{1} = \frac{3434.6}{V}$$

$$166.7 \text{ m}^2$$

$$V = 127.2 \text{ m}^3$$

11. The volumes need to use SF cubed.

$$\frac{500\pi}{V} = \frac{1^3}{4^3}$$

$$V = 3200\pi$$

12.

R.V. $\frac{8}{125}$

S.F. $\left(\frac{2}{5}\right)$

$$13. R.V = \frac{27}{729} = \frac{1}{27} \quad \boxed{S.F. \frac{1}{3}}$$

$$14. RA = \frac{288}{128} = \frac{9}{4} \quad S.F. \left(\frac{3}{2} \right)$$

$$15. RA = \frac{192}{108} = \frac{16}{9} \quad \left(S.F. \frac{4}{3} \right)$$

$$19. SF \quad 4:8 \\ 1:2$$

$$SA_I = LA_{conc} + LA_{cyl} + B$$

$$\frac{1}{2} 4\pi \sqrt{13} + 4\pi 4 + 4\pi$$

$$22.65 + 50.27 + 12.57 \\ 85.49$$

$$\frac{1}{4} = \frac{85.49}{A}$$

$$\boxed{SA = 341.9 \text{ ft}^2}$$

$$V_I = V_{conc} + V_{cyl}$$

$$\frac{1}{8} 4\pi \sqrt{13} + 4\pi 4$$

$$20\pi$$

$$\frac{1}{8} = \frac{20\pi}{V}$$

$$\boxed{502.7 = V} \\ A^3$$